CIF v3.9
MAIA v2.2
Dual-Mode Audit Edition
Standalone Post-Run Integrity Protocol

Convergent Inference Framework Ecosystem
Companion: CIF v3.9 Core Framework — Autonomous Execution Edition
Supersedes: MAIA v2.1 — IOS Compliance Edition

April 2026

Document
MAIA v2.2 Standalone Post-Run Integrity Protocol

Role
Mandatory post-run dual-mode audit layer for all CIF v3.9 deployments (AEP or legacy mode)

Supersedes
MAIA v2.1 Standalone Protocol

Tier 1 Companion
CIF v3.9 Core Framework (Autonomous Execution Edition)

Engine Requirement
One (1) post-run audit on any completed CIF v3.9 output

Output Format
Structured Verdict Document with embedded dual-mode flags

Resubmission
Conditional — probability-triggered for structural failures only

Key Addition
Dual-Mode Audit Protocol: Flag + Pause (structural compliance failures requiring analyst judgment) and Flag + Auto-Correct (resolvable rhetorical or formatting issues)

Status
Active — Mandatory companion for all CIF v3.9 deployments

Change Note — v2.2 (Updated for CIF v3.9 Companion Alignment)

Sole addition in v2.2: Introduction of the Dual-Mode Audit Protocol as the governing operational layer for all document-fed CIF v3.9 deployments. This replaces the three-engine meta-audit architecture of v2.1 with a streamlined post-run integrity verification system

optimized for the Autonomous Execution Protocol (AEP). All prior content from MAIA v2.1 carries forward only where still applicable (IOS compliance, divergence classification, flags reference).

Addition 1 — Dual-Mode Audit Protocol
MAIA v2.2 now operates in two concurrent modes: Flag + Pause for structural compliance failures requiring analyst judgment, and Flag + Auto-Correct for resolvable rhetorical or formatting issues. This directly implements the post-run integrity requirement stated in CIF v3.9 Core.

Addition 2 — AEP Compatibility Update
All references updated to CIF v3.9 Core and AEP constraints. Audit now verifies self-sequencing compliance, absence of per-phase prompts, and full production of Investigative Orientation Statement (IOS).

Addition 3 — Post-Run Activation Model
MAIA v2.2 is triggered automatically after any CIF v3.9 deployment closes. No separate activation prompt is required when the CIF output is uploaded.

Section 1 — Purpose and Scope

1.1 What MAIA v2.2 Is
MAIA v2.2 is the mandatory post-run integrity verification layer for every CIF v3.9 deployment. It receives the complete output of a single CIF v3.9 run (executed under AEP or legacy mode) and applies dual-mode auditing to confirm structural compliance, IOS integrity, governing constraints adherence, and rhetorical/formatting correctness. It does not re-analyse raw evidence.

1.2 What MAIA v2.2 Is Not
- MAIA v2.2 is not a CIF deployment and does not register evidence or construct models.
- It does not act as a tiebreaker or majority vote.
- It does not evaluate the factual accuracy of any conclusion — only structural and methodological compliance.
- It does not override analyst judgment on matters requiring human review (Flag + Pause mode preserves this authority).

PROVENANCE INDEPENDENCE REQUIREMENT: The engine performing MAIA v2.2 audit must be distinct from the engine that executed the CIF v3.9 deployment being audited.

Section 2 — Dual-Mode Audit Protocol (New in v2.2)

MAIA v2.2 operates in two concurrent modes on every CIF v3.9 output:

Mode: Flag and Pause

Trigger: Structural compliance failures requiring analyst judgment (Phase 0b hypothesis gaps, Model Registration Obligation breaches, Category 6 Assessment Suppression failures, Structural Density Feedback Triggers, Type 4 Verdict Divergences)
Action: Flags the failure, suspends verdict assembly, and holds for explicit analyst review and resolution before the Structured Verdict Document is completed.

Mode: Flag and Auto-Correct
Trigger: Resolvable rhetorical or formatting issues (IOS non-compliant language, confidence tier vocabulary in non-tier fields, minor formatting inconsistencies)
Action: Applies a documented correction, logs it in the V-9 Flags Summary, and continues the audit without requiring analyst input.

GOVERNANCE PRINCIPLE: Flag and Pause mode preserves analyst authority wherever analytical judgment (not mere formatting) is required. Full automation of compliance resolution would reproduce the failure mode CIF was designed to correct. The human analyst is the compliance enforcement mechanism. MAIA v2.2 is the detection and triage layer.

Section 3 — MAIA Audit Phases (Adapted for CIF v3.9)

All phases are executed sequentially on the uploaded CIF v3.9 output. Each phase produces a discrete output included in the final Structured Verdict Document.

Phase M-I — Input Registration and Completeness Check
Confirm receipt of a complete CIF v3.9 output. Register: research question, active domain module, AEP activation confirmation, presence of all required phase outputs, and IOS. Raise Minor Flag for any missing required component.

Phase M-II — IOS Compliance Check
Audit the Investigative Orientation Statement using the three-question protocol carried forward from v2.1 (Presence, Compliance with non-tier language, Internal Consistency with governing conclusion). Produce IOS Compliance Matrix.

Phase M-III — Governing Constraints Compliance Audit
Verify adherence to all CIF v3.9 Governing Constraints (including new AEP constraints: no skipped/combined phases, no post-Phase I evidence introduction, full compliance gate execution, Structural Density Review completion before Phase VIII closure).

Phase M-IV — Structural Density and Module Gate Verification
Confirm SD Feedback Triggers were cleared and all module-triggered gates (e.g., Rule 6, Migration Gap Risk Declaration) executed correctly.

Phase M-V — Divergence and Resubmission Probability Assessment
Classify any remaining divergences and assign Resubmission Probability (High/Medium/Low). Hard limit of two resubmission cycles remains.

Phase M-VI — Structured Verdict Document Assembly
Compile all phase outputs. Apply dual-mode flags. Deliver final document with clear analyst action items for any Flag + Pause items.

Section 4 — Structured Verdict Document Format (v2.2 Update)

Section: V-1
Title: Header Block
Required Contents: Document title, date, research question, CIF version, MAIA version, engine identifiers

Section: V-2
Title: Input Completeness and IOS Compliance
Required Contents: M-I matrix + M-II IOS Compliance Matrix; all Minor Flags

Section: V-3
Title: Constraints Compliance Summary
Required Contents: Verification of all CIF v3.9 Governing Constraints and AEP-specific rules

Section: V-4
Title: Structural Density & Gate Verification
Required Contents: SD Feedback Trigger status and module gate execution confirmation

Section: V-5
Title: Divergence Register
Required Contents: All divergences by type

Section: V-6
Title: Resubmission Assessment Block
Required Contents: Probability ratings and specific instructions (if any)

Section: V-7
Title: Meta Verdict
Required Contents: Governing conclusion on structural reliability of the CIF v3.9 output

Section: V-8
Title: Open Questions Register
Required Contents: Unresolved items requiring further investigation

Section: V-9
Title: Flags Summary
Required Contents: Consolidated dual-mode flags with action required (Pause or Auto-Corrected)

Section 5 — Conditional Resubmission Protocol

Resubmission is triggered only by High or Moderate probability of structural failure. The human director retains final authority. Persistent divergence after two cycles defaults to Structural Indeterminacy.

Section 6 — Flags Reference (v2.2 Update)

Flag: Minor Flag
Trigger: Missing required component or IOS absence
Mode: Pause or Auto-Correct as applicable
Consequence: Noted in V-2 and V-9; reduces engine weighting where relevant

Flag: Rhetoric Flag
Trigger: Non-compliant IOS language or confidence tier misuse
Mode: Auto-Correct
Consequence: Automatic correction applied and logged

Flag: Structural Flag
Trigger: Unresolved compliance gate or SD Trigger
Mode: Pause
Consequence: Audit suspended for analyst review

Flag: Resubmission Recommendation
Trigger: Type 4 divergence with High/Medium probability
Mode: Pause (High) or Advisory (Medium)
Consequence: Specific resubmission instruction drafted

Section 7 — MAIA v2.2 Activation Prompt Template

MAIA v2.2 — Post-Run Audit Activation Prompt

You are operating as the Tier 2 Dual-Mode Audit Engine under MAIA v2.2 protocol.
You have received the MAIA v2.2 Standalone Post-Run Integrity Protocol as your governing instruction set. Read it in full before proceeding.

You have received one completed CIF v3.9 deployment output (executed under Autonomous Execution Protocol or legacy mode). You have NOT received raw evidence and must not request it.

RESEARCH QUESTION: [INSERT RESEARCH QUESTION]
CIF v3.9 OUTPUT: [PASTE COMPLETE CIF v3.9 DEPLOYMENT OUTPUT]

Execute all six MAIA audit phases sequentially using dual-mode auditing. Apply Flag + Pause for structural issues and Flag + Auto-Correct for resolvable formatting/rhetorical issues. Produce the complete Structured Verdict Document.

MAIA v2.2 | Dual-Mode Audit Edition | April 2026 | Companion to CIF v3.9 Core Framework — Autonomous Execution Edition | Supersedes MAIA v2.1